

President Emeritus - Tom Scorsone, KC2FCP President - Bryan Jackson, W2RBJ Vice-President - Walt Snyder, N2WJR
Secretary - Dave Smith, WA2WAP Treasurer, Don Mayotte, KB2CDX
Board Members: Tom Scorsone, KC2FCP Russ Greenman, WB2LXC Steve VanSickle, WB2HPR

EGARA Getting Back in Gear as Summer Closes

With Summer 2023 rapidly winding down, EGAR is once again ramping up it's meetings and activities after its traditional hiatus during July and September. However, that doesn't mean summer hasn't been busy!

As part of its agreement with the East Greenbush Masonic Lodge, several club members met up regularly to handle lawn and building maintenance. During one trip to the lodge, Vice President Walt Synder, N2WJR, found a water fixture in the kitchen had broken and was spraying hot water on the walls, floor and ceiling. The water supply was quickly located and shut off, followed by a thorough cleanup of the flooded area. Officials of the lodge were contacted and apprised of the problem. Fortunately, major damage was avoided thanks to the EGAR team.



Officers of the club also met throughout the summer, usually weekly for lunch. These discussions included preliminary planning for upcoming club events, including the resumption of regular membership meetings, scheduling of VE test sessions, the annual fall cruise on the Hudson River, the club's December holiday party, and the 2024 Hamfest. Many of these items will be on the agenda for the general membership meetings.

As mentioned, the annual Hudson River trip has been slated for Saturday, October 14th aboard the Spirit of Albany -- with a rain date of Sunday, October 15th. The timing of the trip will hopefully allow the trip to take place close to the peak of the fall foliage season, with the banks of the river landscape providing a rich pallet of reds and oranges. As usual, the club will provide lunch and refreshments aboard.

At the September 13th meeting, club members will also be asked to provide input about next year's Hamfest and possible location possibilities as the club explores various cost/benefit options.

In This Issue

Page 1 - EGAR Gears Up Again / FD
Page 2 - Member Book Review
Page 3 - Hack ARRL?
Page 4 - On the Beam News & Notes
Page 5 - Meeting Minutes
Page 6 - History of Ham Radio
Page 10 - Hamfest Sponsors
Page 11 - Hams Prep for Disaster
Page 15/16 - ARRL Waiver & Petition
Page 17 - Calendar / Classifieds / Pro Tip

Field Day Disrupted by Weather

The threat of severe weather in the region resulted in this year's Field Day being downsized dramatically. While plans called for EGAR to set up two stations at the Masonic lodge as it had in the past, the forecast of widespread thunderstorms throughout Field Day weekend forced a last minute change.

As a result, club members were asked to operate their home stations on behalf of the club -- providing it was safe to operate. Several members did participate, but inclement weather across the country often made contact difficult as many hams found themselves off the air until conditions improved. In addition, most amateur bands were found to be less than ideal, further reducing the number of contacts that could be made.

As it turned out, most of the heavy weather stayed north of the immediate Capital District, but not in time to resume the club's normal FD operations.

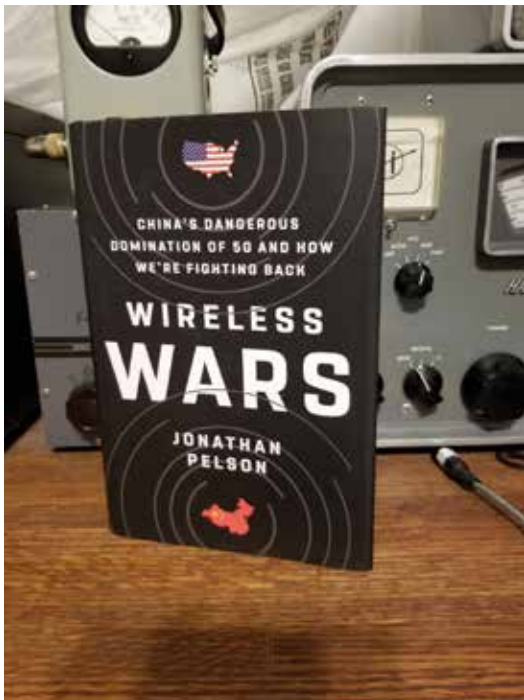
Member Book Review

Wireless Wars:

China's Dangerous Domination of 5G and How We're Fighting Back

Fall weather is just around the corner, and enjoying a good book inside can ease the transition as the weather cools down outside.

Club Secretary Steve VanSickle, WB2HPR, recently found an interesting read and he shares it here...



I recently had the opportunity to read an interesting account of the evolution and revolution of the latest cellular technology in *Wireless Wars: China's Dangerous Domination of 5G and How We're Fighting Back* written by Jonathan Pelson (BenBella Books)

The author's focus is on the evolution of cellular technology and the impact it has on global communication, both from a security aspect to its impact on our economy. The book's 301 pages make for a quick read, but its pages are filled with fascinating facts about how we have become so dependent on this digital technology we refer to as "cellular".

Much of the discussion reveals how China has become the dominant force in wireless digital, and what we can do to retain a presence in the development and deployment of 5G technology. This book is filled with numerous references to recognized industry key players, and interviews – which are substantiated by copious end notes.

This is a very timely book – as the evolution of 5G will have a substantial effect on how farmers grow crops, how we deploy our military, how we bank, to how manufacturing is run, - even to how we navigate in the latest wave of EV transportation.

"Wireless Wars" is not a heavy technical book, but rather is written for the layperson, and it paints a chronological picture of how digital technology has changed our everyday lives, and the part it will play in the future.

I enjoyed the read, and I think that you will too.

Wireless Wars: China's Dangerous Domination of 5G and How We're Fighting Back

BenBella Books - 328 pages, 27 illustrations.



Hack the ARRL?

By Dan Romanchik, KB6NU

I recently attended DEFCON (<https://defcon.org>), which is arguably the premiere hacking conference in the world. DEFCON hosts a number of special interest groups they call “villages” (<https://forum.defcon.org/node/244771>), which organize their own sub-conferences on topics ranging from artificial intelligence to voting. One of those villages is the Ham Radio Village, and as I did in 2022, I taught a one-day Tech class in the Ham Radio Village.

So, what does this have to do with the ARRL? Well, one of the more popular amateur radio sub-hobbies is to complain about the ARRL. I won't list all the complaints here, but I think that most of you will agree that there are more than a few complaints out there.

Well, part of the hacker ethos is to not just complain about things, but to do something about it. The Wikipedia entry on hacker culture (https://en.wikipedia.org/wiki/Hacker_culture) puts it this way, [hackers enjoy] the intellectual challenge of creatively overcoming the limitations of software systems or electronic hardware (mostly digital electronics), to achieve novel and clever outcomes. It seems to me that we could creatively overcome some of the limitations of the ARRL, i.e. hack the ARRL, if we put our minds to it.

I think that Parks on the Air (POTA) (<https://parksontheair.com>) is a good example of this. The ARRL actually gave birth to POTA with their year-long National Parks on the Air program (<http://arrl.org/npota>) in 2016, which celebrated the 100th anniversary of the U.S. National Park System. It was a very popular activity, but the ARRL dropped it like a hot potato once the year was over.

Fortunately for ham radio, a dedicated group of ham hackers stepped up and created the current POTA program. POTA is wildly popular and has been a real boon to amateur radio.

Get your hacking hats on

So, what else can be hacked? One thing that I can think of off the top of my head is Logbook of the World (<http://arrl.org/lotw>). At one time, there was talk about making it a more real-time system. I'm not sure whatever happened to that project, but my guess is that the programming was a lot more complicated than originally anticipated, and it got put on the back burner.

Another possible ARRL hack would be to do something about the ARRL's digital magazines. This hack is particularly needed now that fewer and fewer members are going to be getting the print versions of QST, QEX, and the National Contest Journal. Making the information more easily accessible I think would end up being beneficial for the ARRL as well as ham radio in general.

Can you hack a hamfest?

This isn't strictly an ARRL thing, but one aspect of ham radio that I would love to see hacked is hamfests. Recently, on the social media platform Mastodon, someone wrote:

“Researching local hamfests, and they're still such an old man thing: 7 am open gates. Grange fair. Fire house. Greasy breakfast cart. Noon close.”

“Can we get like a 3 pm start time at a farmer's market with snacks, kombucha, and chiptune DJ?”

My reply was, “There's nothing that I know of that stopping anyone from starting something new. I would love to see someone come up with something like a hamfest that's more relevant for younger hams and easier for them to attend. It wouldn't be easy to do, but life's not easy, is it?”

Ham radio needs the hacker ethos now more than ever. Hackers take on difficult challenges because they are difficult, don't they? So, let's get to it.



On the Beam

News & Notes

ARRL Dues to Increase Starting in January

The ARRL Board has voted to raise annual dues from the current \$49 to \$59 -- however the cost will actually be \$84 for members who still want to get printed copies of QST magazine. Otherwise, they will receive only digital copies. The League has also suspended the sale of lifetime memberships while it evaluates its pricing for that tier.

ARRL President Rick Roderick, K5UR, said the increases are necessary to maintain the financial health of the organization, adding that the last increase in dues was in 2016. In May 2023, members were asked to take a survey about increasing dues.

According to ARRL's 2022 annual report, it lost some 6,600 members during that year bringing the total to about 151,900. Below is a listing of the new dues that will take effect in January.

Membership Type	Description	1 Year	3 Years
US	All the benefits of ARRL membership plus 4 digital magazines.	\$59	\$174
add print QST magazine	12 issues of QST via standard mail. Membership required.	+ \$25	+ \$75
add print On the Air magazine	6 issues of On the Air magazine via standard mail. Membership required.	+ \$25	+ \$75
US + First-Class Mail® delivery of QST	12 issues of QST via First-Class Mail®.	\$132	N/A
Life Membership First-Class Mail® delivery of QST – paid annually	12 issues of QST via First-Class Mail® for a current Life Member.	\$48	N/A
Family	Must reside with primary member and have corresponding membership dates.	\$12	\$36
Student	Must be under the age of 26.	\$30	N/A
Blind	Requires a one-time signed and dated statement of Legal Blindness.	\$12	\$36
International	All the benefits of ARRL membership plus 4 digital magazines.	\$59	\$174
International + QST via standard mail	Membership plus 12 issues of QST via standard mail.	\$95	\$282

EGARA June Meeting Minutes

- The June meeting of the EGARA was called to order by President Bryan Jackson, W2RBJ at 6:55 PM. There were 26 members in attendance at the Masonic Temple. After a round-robin introduction, the raffle was conducted, and several nice prizes were given out.
- Bryan Jackson, W2RBJ gave his President's report as follows:
- The thank-you pizza dinner for the Ham Fest volunteers has yet to be scheduled and the location is indeterminate, because Mercato's Restaurant has closed.
- At the June 10th VE session, 6 applicants passed their exams, with several upgrades. Among them were club members Harry (extra) and Melva (general) Olson. Future VE sessions will be planned. No newsletter will be published during July and August.
- The Special Event/USS Slater QSLs are being sent out. Despite mis-information, the recent hamfest was successful. There is some uncertainty about the date and rental costs associated with next year's hamfest. Tom Scorsone, KC2FCP recommended that the date be secured ASAP.
- Dave Jaeger, K2DEJ reported that some of the hamfest signs are missing.
- Several Field Day sign-up sheets were circulated so that membership could enroll in the various weekend activities. On Friday, the dipole antenna will be set up, the computers setup, and the equipment staged. On Saturday, the balance of the equipment will be setup and checked. Operation begins at 2 PM and runs through Sunday 2 PM. Tear-down follows. Many volunteers are needed to ensure success. Food and drink will be supplied by the club. Local officials will be invited. A PDF of further information will be sent to the membership by email. Nifty manuals are being sought. We need a functional First Aid kit. (see story on page 1)
- Refreshments were enjoyed by the membership. The meeting was adjourned at approximately 7:56 PM.
- Minutes recorded by Secretary Steve VanSickle, WB2HPR

The History of Ham Radio: Third Parties

Chris Codella, W2PA, author, John Pelham, W1JA, editor, Phil Johnson, W2SQ, editor

(Editor's note: By special arrangement with the authors, Sidebands is pleased to present this multi-part series on the history of ham radio. Subsequent chapters will be published in future monthly editions of the newsletter)

Since message traffic was a contentious issue at the 1927 international convention, the League's General Counsel and Rocky Mountain Division Director, P. M. Segal, 9EEA, analyzed the new law and international agreements, and offered his opinion about the nature of the amateur operations they permitted.

The amateur designation had different meanings in sports and radio, he began. In sports, an amateur could lose that status by getting paid just once—amateur and professional were mutually exclusive. But in radio, an amateur may work in radio as a profession and yet engage in amateur radio too, as long as the two activities were separate. And professional is not the only opposite of amateur in radio—commercial, which is also non-exclusive, is another.



In fact, an operator who had a commercial license was automatically eligible to operate an amateur radio station with no additional credentials. A station, however, could be commercial or amateur but not both, depending on the purpose for which it was built, licensed, maintained and operated.

Segal then analyzed all the senses in which a message could be considered commercial correspondence, eliminating those that led to logical inconsistencies or were at odds with well-accepted practice. The language in the 1927 law was intended “to recognize and deal with amateur stations and traffic as those stations existed and as that traffic was conducted at the time the Act was passed,” he reasoned.

The handling of messages for personal gain was at the center of the distinction. By 1927, “it was the well-established custom of amateur stations to handle messages of all kinds and importance provided only that the handling was without compensation of any kind to the amateur,” wrote Segal, citing similar language in a legal text.

The Commission's revised regulations, written to adhere to the 1927 law, also contained language derived from sections of the new International Radiotelegraph Convention so as to be in compliance. So did the FRC's General Order 24, which defined an amateur station. Although this indicated the FRC's intent to adopt specific language from the convention, one paragraph was omitted because it would have conflicted with the way messages were handled according to customary practice in the US.

In this paragraph the convention sought to eliminate any amateur message traffic that was perceived to be a competitive threat to commercial carriers. Since the paragraph did not appear in any of the regulations adopted by the Commission, Segal concluded that its omission was deliberate, meant to preserve the established flow of amateur message traffic in the US. Otherwise, amateurs would have been limited to handling only those messages that were private and “by reason of their unimportance, recourse to the public telegraph service might not be warranted,” as the treaty required internationally.

-continued on page 7-

The History of Ham Radio...

Unfortunately this reasoning also implied that under the 1927 law amateurs in the US would be allowed to handle messages on behalf of commercial interests—something Segal did not view as a flaw or loophole, but an affirmation of the “well-established custom” of allowing any content at all, as long as the operators did not derive a benefit from its handling.

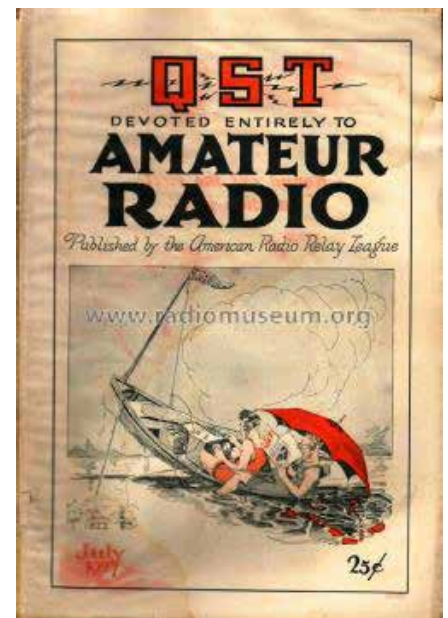
His conclusion about the nature of message content, printed in QST using nearly all capital letters, read:

“AN AMATEUR OPERATOR, AT AN AMATEUR RADIO STATION, MAY, UNDER THE LAW, ACCEPT FOR TRANSMISSION, TRANSIT, RELAY OR DELIVER A MESSAGE OF ANY KIND OF TEXT, IMPORTANCE OR SOURCE SO LONG AS NO MONEY OR OTHER VALUABLE CONSIDERATION IS DIRECTLY OR INDIRECTLY PAID OR PROMISED HIM OR CHARGED OR ACCEPTED BY HIM,” subject of course to the general laws against obscene or profane language over the air.

Thus, an amateur could help a company do business as long as it was free of charge and not obscene.

To illustrate the principle, he explained how a company employee who also happened to be an amateur may transmit his company's reports to another branch office via amateur stations as long as the amateurs involved do so on their own time, do not get paid for the service, were not hired because of their status as amateur operators, or gain any other kind of benefit from handling such messages.

Although Segal apparently considered the convention's restriction on content to be severe, he was nonetheless willing to overlook this glaring inconsistency in the definition of non-commercial operation. It would have to be clarified later.



Having long handled traffic between countries as if no border existed, the US and Canada prepared for the convention, which prohibited international message traffic except where two countries formalize an agreement to allow it.

The two countries reached such an agreement in 1928 as the direct result of an initiative by the ARRL. Messages could be handled that are “of such nature as would not normally be sent by any existing means of electrical communication, except during emergencies or from isolated points not connected by any regular means of electrical communication.”

The ARRL asked the State Department to establish such relationships with other countries.

When Things Go Wrong - The RCA “Fireball”

The Story of an RCA Broadcast Transmitter Defect

By Richard Johnson

In general, RCA had a good reputation for well-built transmitters. Even today, if you look at the immaculate wiring inside the transmitters, there is some admiration for the folks that did the work. But not all the transmitters were trouble-free.

Hans Bott designed some of the early RCA FM transmitters and for their day, they were quite reliable. However, when RCA moved its Broadcast group to Meadowlands, Pennsylvania, they lost their most significant transmitter designer. Hans went to Gates Radio (now GatesAir) and headed up their new television transmitter division. Many years later, I worked for Hans as he came out of retirement to become VP of Engineering at McMartin Industries in Omaha, Nebraska. Hence, I am quite familiar with “both sides” of the RCA transmitter quagmire.

A GOOD DESIGN OVERDONE

In the early ‘60s, RCA took the basic 10 kW RF final amplifier design and added a solid-state power supply, a new vacuum-tube exciter, the BTE-10C, a new power amplifier tube, and a larger blower. The result was the BTF-20E FM transmitter, which was set out to serve the 20 kW transmitter market. It had several problems, all of which I will not detail here.

A REAL FLAMETHROWER!

The major problem was that once an arc started in the PA box, it would track across a highly-flammable Rexolite plastic shelf and start a fire. Then, fanned by the high-velocity air from the blower, the fire would cause molten aluminum to run out of the transmitter and start more fires. Occasionally, discussions about the 20E pop up on different Internet mailing lists. The content always ended up all about its fires. This transmitter eventually earned the unflattering nicknames of “Flame Thrower” and “Fireball.”



HOW THE 20E GOT ME

I worked for RCA Service Company out of the South Philadelphia office then. Although very young then, I enjoyed installing TV transmitters, rebuilding old ones, and performing proof-of-performance measurements for RCA equipment, including TV transmitters and antennas. I loved the job because I visited many major cities and worked with some outstanding people in the broadcast industry. Since I spent most of my time in the field, the company paid my living expenses, so I could save money and even purchase my first new automobile. Life was good!

BUT THEN...

An emergency occurred. A fire had destroyed some stations that installed new RCA BTF20E FM transmitters. To correct the problem, RCA developed a new “retrofit kit” to install into the remaining FM transmitters. This was to prevent future fires. I was sent to Meadowlands to learn how to install these kits in the field. David Sauer was the engineer in charge. He explained that once an arc had started within the PA box, no overload condition was detected because the PA current could actually drop. The power that used to go out to the antenna would dissipate within the PA box, possibly starting a fire.

The retrofit installed a device to compare RF output power, and if the PA amplifier was on but there was low RF output power, the kit would turn the PA off. I asked Mr. Sauer how one could turn on the PA since there was no RF power until it was on. He explained that the logic bypassed the new circuit as long as the “ON” button operated or the remote control system performed the same action. This did not seem right to me, but I was just a technician, learning as I was gaining experience.

THE DESIGN FLAW

Even as a technician, I had designed a one-kilowatt AM transmitter, a Type Accepted by the FCC, and I did not need to make such a kludge. I was concerned because my experience within the broadcast industry made me think that an operator at the studio, sensing that the transmitter would go off as soon as he removed his finger from the ON button on the remote control unit, would keep the button pressed until the chief engineer told him otherwise. (continued on page 9)

The RCA Fireball...

This would allow the RCA transmitter to continue to arc, possibly starting a fire.

INSTALLING THE RETRO KIT

The first transmitter into which I was selected to install the retrofit kit was that of WMMR, Metromedia Radio in Philadelphia, Pennsylvania. The transmitter was located at the top of the PSFS building (now the Loews Philadelphia Hotel). I installed the kit with the help of the station's Chief Engineer. As trained, I instructed him to set the RF output meter trip point properly. Everything worked as expected.

... AND GUESS WHAT HAPPENED ...

About a week later, the WMMR transmitter caught fire. It burned the entire top of the PSFS building, destroying millions of dollars of telephone company equipment and transmitting equipment. And I was promptly fired!

To me, this meant that my whole life had been destroyed. I had become a fall guy for some big corporate bigwigs who had no concept, nor did they even care, about what was right or wrong.

THE BENEFIT OF MOVING ON

Fortunately, I could find another job quickly, so I did not dwell too long on RCA's atrocious, unconscionable misbehavior.

There were many other RCA transmitter fires, often on the top floors of buildings like the PSFS building. The fires continued long after the company installed the so-called retrofit kits. I can only guess that RCA could not find anyone else to fire. Then, I decided to continue my education so I could do everything within my power to design RCA out of the broadcast transmitter business.

TRANSMITTERS THAT DID NOT FLAME OUT

I did get my revenge. I developed top-of-the-line broadcast transmitters for new up-and-coming broadcast transmitter manufacturers for the next fifteen years.

Included in my credits are two fifty-kilowatt AM broadcast transmitters, the first one-kilowatt solid-state FM transmitter ever Type Accepted by the FCC, and the first one-kilowatt solid-state AM transmitter. The techniques I originally developed are still used today.

In mid-career, I abandoned broadcast transmitter design to enter the medical electronics field, where I continue today. At sixty-seven, I am still gainfully employed as an engineer, and many former RCA employees have gone to their final resting place, hopefully on the other side of the River Styx.

But I believe those who worked for RCA at the time still owe me an apology.

About the author: Richard Johnson has been designing electronics for broadcast for over 55 years, including the first solid state kilowatt AM transmitter, as well as a complete 50 kW AM transmitter, one of which is still reported to be on the air after 50 years.

Credits: The fire photograph of the burned transmitter is by Neil Schwanitz



Here is what one of those transmitters looks like after a fire -- if one is lucky enough to extinguish it before it destroys the whole site.

***Looking for Great Deals?
Get Them From a EGARA 2023 Hamfest Sponsor!***



No cellphone? No problem! Vintage Radio Enthusiasts Prepping for Disaster

Ham radio users, from teenagers to eighty-somethings, are ready to communicate in the next crisis – be it a wildfire, pandemic or ‘the big one’

by Amanda Ulrich, The Guardian



There's an ancient fable that Glenn Morrison, a pony-tailed, 75-year-old who lives in the California desert, likes to tell to prove a point. As the lesson goes, one industrious ant readies for winter by stocking up on food and supplies, while an aimless grasshopper wastes time and doesn't plan ahead. When the cold weather finally arrives, the ant is "fat and happy", but the grasshopper starves.

In this telling, Morrison is the ant, and those who don't brace themselves for future emergencies – they're the grasshoppers.

Morrison is in the business of being prepared. He's the president of the Desert Rats (or the Radio Amateur Transmitting Society), a club based in Palm Springs that's dedicated to everything ham radio.

The old-school technology has been around for more than a century. In lieu of smartphones and laptops, ham radio operators use handheld or larger "base station" radios to communicate over radio frequencies. The retro devices can range from the size of a walkie-talkie to the heft of a boxy, 20th-century VCR.

Generations after its invention, one of ham radio's biggest draws for hobbyists is its usefulness in an emergency – think wildfires, earthquakes or another pandemic. If disaster strikes and Internet or cellular networks fail, radio operators could spring into action and help with emergency response communications, and be able to keep in contact with their own networks.

And the historically fringe world of ham radio is having a moment. In California, there are now nearly 100,000 licensed amateur radio operators, often simply called "hams", and more than 760,000 across the country. That total greatly surpasses the number of hams from 40 years ago, even as newer technology has left radio in the dust.

In an era of climate crisis with more intense storms and more frequent wildfires, and other disasters such as global pandemics, ham radio is becoming a tool for some who want to regain a modicum of control.

"Ham radio," Morrison said, "is like the original social media."

"People aren't prepared. And they keep thinking, 'Well, that's not going to happen in my lifetime.' And it may not, but you never know. I've always wanted to be ready for what's next."

On a balmy Saturday morning in Palm Springs, the thermostat already creeping its way towards 80F (27C), a few dozen people trickled into a local gymnasium, finding seats at folding tables set up below the basketball hoops. Volunteers with the Desert Rats, who had organized the makeshift radio testing day for new hams, handed out a stack of exams. If the hams passed the 35-question test, they could become licensed as entry-level amateur operators by the Federal Communications Commission.

One prospective ham was a high school student, a 17-year-old in a gray sweatshirt named Boaz, who took the course with his dad. Boaz first got into amateur radio through YouTube videos, he said, a year before the pandemic started.

-continued on page 12-

Hams Prepping for Disaster...

"I've always wanted to be ready for what's next," he said. "If something happens and there's no cell service, how am I going to talk to people?" Getting his driver's license, his dad added, is Boaz's next major goal.

Another newly christened ham, a college professor named Skip Fredricks who sported a black bandanna, tinted aviator sunglasses and a Star Wars T-shirt, said he was hoping to use amateur radio in the classes he teaches about drones. In disaster areas, where drones are sometimes used for search and rescue missions, the radios could help drone pilots communicate better, he said.

"In very remote areas, communication is a problem," he said. "The ham radio support is better than just walkie-talkies – and cellphones are useless in the mountains."

Fredricks held up his new radio certificate, proving he had passed the exam, printed on a bright yellow sheet of paper. "Pretty cool, huh?" he said, looking it over. "My students will probably be impressed."

Ham radio and 'the big one'

Since the early 1900s, ham radio has been used as a lifeline during storms, disasters, wars and other emergencies.

Hams, a term thought to have originally been a smear targeting unskilled amateur operators, were deployed to the Caribbean in the aftermath of Hurricanes Irma and Maria in 2017. Shortwave radio also became a way for Ukrainian citizens to get news after Russia attacked communication towers last year, and Taiwanese ham radio enthusiasts have used it to prepare for potential war with China. Astronauts have even used ham radio to chat with people back on Earth.



Left: Dorothy Strauber, member of the Young Ladies Radio League of Long Island, uses earphones to listen to her ham radio receiver in 1954. Right: Early radio ham operators circa 1919.

The radios have even cropped up in disaster movies and TV shows – most recently in scenes from HBO's *The Last of Us* that show a clandestine radio operator sending messages across a zombie-ravaged country. And, living in southern California and considering the region's web of fault lines, Morrison, the club president, often thinks about earthquakes.

"If 'the big one' hits, we're not going anywhere," he said. "You have to be self-reliant. You're going to need food supplies and all that stuff. But also if you want Aunt Marge in Portland to know that you're OK, then we can send her a radio gram."

More specifically, if organizations such as hospitals, fire stations and emergency command centers call for communications assistance, qualified amateur operators can mobilize to help; many hams have "go kits" for just that purpose, with supplies including handheld radios and portable antennas.

One such emergency response took place this year, as winter storms pummeled California. In Big Bear, a remote, mountainous community that saw an onslaught of heavy snow over the past few months, amateur radio operators frequently went on the air to broadcast road closures and other local news to their networks. "I knew the roof on one market had collapsed before it was on the news because I heard it on the radio first," Morrison said.

As an informal slogan for the American Radio Relay League, a national association for amateur radio, promises, ham radio is the ultimate backstop for "when all else fails".

Richard Norton, director of the league's south-western division, first got hooked on ham radio in high school because he was drawn to the hobby's technical side. Decades later, he's seen newer hams' interest shift to emergency preparedness. In the little town of Topanga outside Los Angeles, where Norton lives, many residents have thought about what they would do during an earthquake or wildfire if cell signal was lost, he said.

-continued on page 13-

Hams Prepping for Disaster...

One answer? Get a ham radio.

“Even when cellphone systems go down, our ham systems generally are working and we can communicate,” he said.

‘Working the world’

From a hushed neighborhood tucked into the base of desert mountains, about 10 miles down the road from downtown Palm Springs, Morrison took a seat at his desk and “worked the world”. Spinning a large black dial on the face of a bulky base station radio, he tuned into a realm of static and distant, garbled voices. He strained to listen, parsing faint words, then pulled forward a gold microphone.



The Desert RATS logo on the back of a t-shirt worn by Glenn Morrison.

“Uh, Whiskey, Bravo, six, Romeo, Lima, Charlie,” Morrison said into the static, adopting the upbeat lilt of a radio DJ. The illogical string of words represents WB6RLC, his call sign, or the unique signature assigned to each ham that inevitably becomes as important as a name. Morrison’s sign was printed in bold letters on his hat, and the back of his T-shirt proudly displayed the Desert Rats club logo: a grinning rodent, its tail wrapped around a radio antenna.

Still spinning the radio dial, Morrison stumbled into a perfunctory conversation between someone around the general Nevada and Utah “call area” (the designation for where a radio license was issued) and a man in Barcelona.

“That’s how you just tune around and find somebody,” Morrison said happily. “And oh, look, he’s in Barcelona.”

On a computer monitor connected to his radio, Morrison pulled up a comprehensive list of 215 countries, territories and other areas he’s “worked”, or contacted, from this small town in southern California: Argentina. Australia. Algeria. American Samoa. “And those are just the A’s,” he said.

Around Morrison’s one-story home, everything revolves around radio. Desert Rats sketches and maps adorn the walls. A tangle of antennas sprouts from the corner of his roof. The camper van parked in his driveway is equipped with a “mobile station” radio for any necessary on-the-go calls. There are radios in every room of his house, save for the guest bathroom.

And Morrison’s main radio room, where he overheard the Barcelona conversation, is the crown jewel. The small space attached to his garage has a command center-style feel, with an entire wall devoted to dozens of vintage radios, some over a hundred years old, that Morrison sources from flea markets and friends.

“Sometimes they just find me,” he added.

Beyond using the radios for emergency communications, hams find meaning in the hobby for its own sake, and in the almost-instant network it provides. Every Monday night, the Desert Rats host a radio “net”, similar to a public conference call, where amateur operators check in and go through a simple verbal roll call of names and call signs. That type of basic welfare check was particularly important three years ago, during the very first isolating, stay-at-home phase of the pandemic.

“It gave me something to do,” Morrison said. “I’d go to my radio shack in the garage, flip on the radio and find somebody, God knows where, to talk to.”

More than an ‘old guys’ club’

Back in the Palm Springs gym, volunteers with the Desert Rats graded exams, their own handheld radios holstered at the hip. Annie Larson, head of membership for the club, buzzed around the room’s periphery, glancing at some of the complex test questions about signal frequencies and the properties of radio waves. “I don’t know if I would pass today,” she joked.

-continued on page 14-

Hams Prepping for Disaster...

Larson, who recently turned 80, has been a licensed ham for more than a decade, but she doesn't think of herself as a "tech-y" person. "I'm just interested in being able to take care of myself in an emergency," she said.

Larson grew up in Idyllwild, a small town lodged in the mountains that loom above Palm Springs. The community, heavily wooded and right on the doorstep of Mount San Jacinto state park, is often threatened by wildfires. A few years ago, as one blaze moved closer and closer to the town, Larson ignored local evacuation warnings and stayed behind with a few park rangers. Having her radio with her was a great reassurance.

"I could listen to it at night and just leave it on," she said, instead of needing to constantly check her phone. "If something came up, I was available."

While amateur radio used to be something of a boys' club (and "it still is a little bit", she added), Larson said she sees more female operators today; about a quarter of those at the Palm Springs testing day were women. And with the wide-ranging impacts of the climate crisis, Larson thinks the hobby is relevant for all.

"People used to think it was like this old guys' club, guys just putzing around," she said. "But it really is important, because the population is increasing and there are many more disasters."

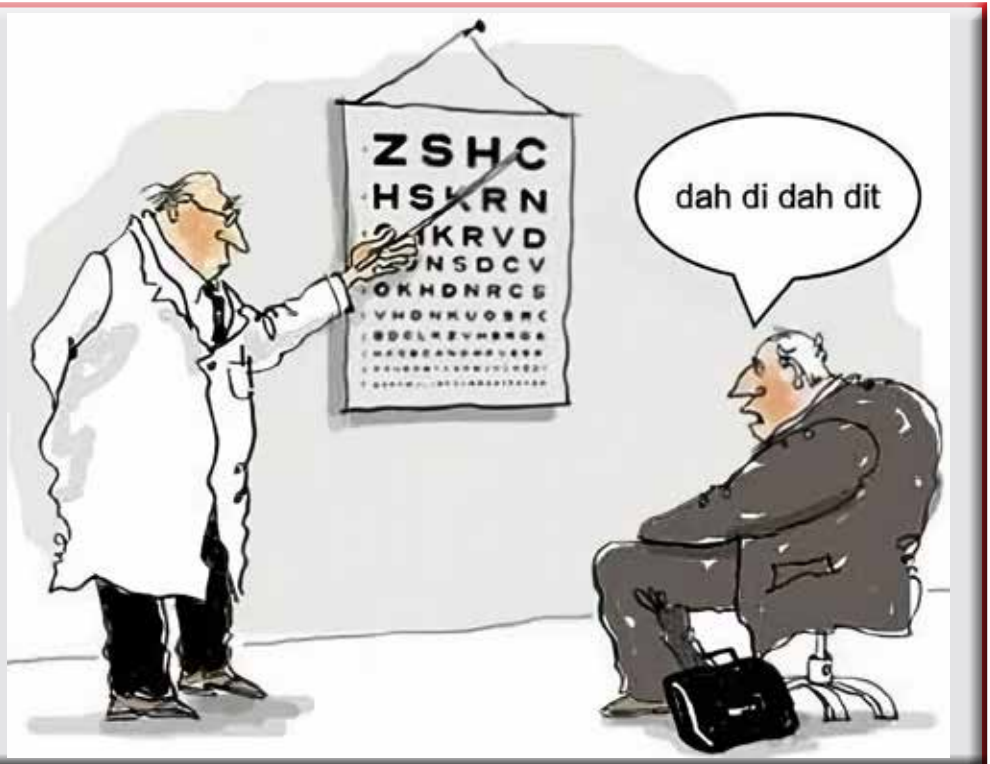
Fortunately, within the Desert Rats club, hams remain a tight-knit bunch. As the latest batch of radio operators received their certificates after the testing day, some were emotional as they walked out into the desert heat. Morrison stood by the exit, congratulating and shaking hands with each person.

"We'll catch you on the air," he called behind them.



80 year old Annie Larson has been a licensed ham for more than a decade.

Ham Humor



FCC Grants Amateur Baud Rate Waiver With Hurricane in Mind

The FCC issued a 60-day waiver to allow amateur radio data transmissions at a higher baud rate than normally allowed to help with relief for areas affected by Hurricane Idalia.

The Mobility Division of the commission's Wireless Telecommunications Bureau granted the request, which had been submitted by the American Radio Relay League.

"ARRL seeks this waiver for those licensed radio amateurs who are directly involved with Amateur Radio Emergency Services (ARES) and other communication support groups working with federal, state and local emergency management officials," the FCC wrote in its summary.



"ARRL states that Section 97.307(f) of the commission's rules prevents the use of certain protocols capable of higher data rate emissions in the High-Frequency (HF) bands and many amateur stations active in emergency communications preparedness are capable of using.

According to the FCC's notice, *"The waiver is limited to amateur radio operators in the United States and its territories using publicly documented data protocols that are compatible with FCC rules, with the exception of the data rate limit waived here, for those directly involved with HF hurricane relief communications if requested by Federal, state, and local emergency management officials."*

ARRL also pointed out that the past FCC temporary waivers have allowed such protocols in similar events including Hurricanes Maria, Dorian, Laura, Ida and Ian; Typhoon relief communications in Hawaii; and wildfires in the western areas of the country."

Meanwhile, Scientists at NOAA's Climate Prediction Center have increased their prediction for the ongoing 2023 Atlantic hurricane season from a near-normal level of activity to an above-normal level of activity. Forecasters believe that current ocean and atmospheric conditions, such as record-warm Atlantic sea surface temperatures, are likely to counterbalance the usually limiting atmospheric conditions associated with the ongoing El Nino event.

NOAA forecasters have increased the likelihood of an above-normal Atlantic hurricane season to 60% (increased from the outlook issued in May, which predicted a 30% chance). The likelihood of near-normal activity has decreased to 25%, down from the 40% chances outlined in May's outlook. This new update gives the Atlantic a 15% chance of seeing a below-normal season.

NOAA's update to the 2023 outlook — which covers the entire six-month hurricane season that ends on Nov. 30 — calls for 14-21 named storms (winds of 39 mph or greater), of which 6-11 could become hurricanes (winds of 74 mph or greater). Of those, 2-5 could become major hurricanes (winds of 111 mph or greater). NOAA provides these ranges with a 70% confidence. These updated ranges include storms that have already formed this season.

ARRL Files Comments Against “Seriously Flawed” HF Rules Petition

ARRL has filed comments against a proposal that would introduce high-power digital communications to the shortwave spectrum that in many instances is immediately adjacent to the Amateur HF bands.

The “Shortwave Modernization Coalition” (SMC), which represents certain high-frequency stock trading interests, filed the petition with the Federal Communications Commission. ARRL responded on behalf of its members and the 760,000 licensees of the Amateur Radio Service in the US.

The ARRL Laboratory performed a detailed technical analysis over several months to determine if the proposed rules would affect operations on the bands allocated to Radio Amateurs that are inter-mixed with the Part 90 bands in the spectrum in question. ARRL’s analysis determined that, if the proposed rules are adopted, the new operations inevitably will cause significant harmful interference to many users of adjacent and nearby spectrum, including Amateur Radio licensees.



Ed Hare, W1RFI, a 37-year veteran of the ARRL Lab and internationally recognized expert on radio frequency interference, was the principal investigator on the study. Hare concluded the petition should not be granted. “This petition seeks to put 50 kHz wide, 20,000-watt signals immediately next to seven different amateur bands with weaker protections against interference than required in other services,” said Hare.

In its formal opposition, ARRL stated, “That destructive interference would result if operations commenced using anything close to the proposed maximum levels.”

ARRL’s comments highlight flawed analysis and incomplete data submitted by the petitioners. It noted the petitioners “... significantly understate the harmful interference that is not just likely, but certain, if the rules proposed by SMC are adopted as proposed. It is noteworthy that SMC’s proposed rules would provide less protection than the much-lower power amateur radio transmitters are required to provide Part 90 receivers.”

ARRL’s opposition also noted that there was no reported tests conducted with Amateur or other affected stations, but referenced a spectrum capture in the Comments filed with the Dayton Group that showed actual interference into the Amateur 20-meter band from one of the High Frequency Trading experimental stations.

Part 90 HF rules currently authorize a maximum signal bandwidth equal to a voice communications channel, at up to 1000 watts peak envelope power (PEP). The petition seeks multiplication of signal width, greater transmitted power, and weaker rules that protect users of adjacent spectrum. ARRL’s comments expose the likely fallout:

“Incredibly, notwithstanding the significant increase in potential interference that would result from using digital schemes with 50 kHz bandwidths and 20,000 watts of power, SMC also proposes to substantially lessen the protections required to protect adjacent and neighboring licensees. SMC proposes [out-of-band emissions] limits that offer less protection than the existing Part 90 limits and would actually permit no attenuation (0 dB) at the edge of adjacent allocations, many of which are bands allocated to and heavily used in the Amateur Radio Service. Consistent with lessening protections while increasing the potential for harmful interference, SMC also proposes a lower limit for spurious emissions. SMC would reduce the existing protection of -73 dB for the applicable 1000-watt power limit to just -50 dB protection for their proposed 20,000-watt limit. Due to the much wider 50 kHz proposed bandwidth, the resulting interference would penetrate deep into the adjacent Amateur bands.”

The proposal has been assigned FCC Docket No. RM-11953. While the period for commenting on the petition has now closed, replies to comments in the record may now be submitted.

Hundreds of licensed Radio Amateurs filed comments in the Docket, expressing overwhelming opposition to the proposal. “If granted as written, this would be devastating to Amateur operation for many tens of kHz into our bands,” said Hare.

CALENDAR

September 13, 2023 - 7 pm - Regular monthly club meeting, East Greenbush Masonic Lodge

October 14, 2023 - 10 am - Annual Hudson River Cruise, Port of Albany. Rain date, Sunday, October 15th.

January 1, 2024 - ARRL annual dues increase

Pro Tip: What's That Sound?

The HF bands are full of cryptic signals that may leave you baffled as to what they're all about.

Fortunately, there's a website that can help you figure it out -- www.sigidwiki.com.

Here you'll find nearly 100 different sound "signatures" heard on the shortwave bands, including audio samples and their corresponding waterfall images. They include everything from 8PSK to System Fusion -- and much more!

For each signal's name, there's a brief description, the frequencies used, the modulation mode and where in the world they're generally in use. In addition, the signals are color-coded to indicate whether they're currently in use or inactive.

So, next time you hear a sound you want to know more about, just go to this site!

www.sigidwiki.com/wiki/Category:Amateur_Radio

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.



GEAR FOR SALE

• Rohn tower sections

Contact Bob Stark, KA2EXK for details at:
bob.claudias@gmail.com

- MFJ-9575, 10 watt 75 meter LSB transceiver
 - DX Engineering, 200 watt 75 meter bandpass filter
 - TEN-TEC 1209, 2 meter to 6 meter transverter
 - TEN-TEC 1210 10 meter to 6 meter transverter
- Make offers for any above

Contact: John Hackert, WA2JAE (518) 381-4847,
Email: Wa2jae@Arrl.net or
John.hackert@Reagan.com

- Cobra ultra lite 80-10 dipole 80-10m \$75.00 w/ balun.
- Heil RS 1 12' riser brand new \$ 30.00

Contact Walt, N2WJR, N2WJR07@gmail.com

- Voltmeter kit, \$5
- USB signal link. \$50

Contact Don, KB2CDX at: ddm653@gmail.com

**Sell your unused gear with a
free ad in Sidebands!**

**Send details to:
W2RBJ@Outlook.com**